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Application No. 10/763,263

Docket No.: 021384.0101PTUS

REMARKS

Applicant appreciates the Examiner's review of the application as set forth in the December 12, 2006 Office Action.

Applicant further appreciates the indicated allowability of claims 1 - 13 and 28 - 33. Reconsideration and withdrawal of the rejections of the remaining pending claims are requested.

Claim 23 has been amended to more clearly indicate that the two-dimensional model of the structure does not necessarily have to be stored in the memory of the computer processor prior to the start of the mapping. For example, at a start of a particular mapping project, the system may be calibrated for a particular site. This may generate the two-dimensional model that may be stored in memory. See, for example, paragraphs 0032 - 0033. No new matter has been added by the amendment.

New claims 34 - 36 are supported by the specification at, for example, paragraph 0024. No new matter has been added by the amendments.

Claims 14 - 27 are patentable under 35 U.S.C. 102(e) over Herron et al. (U.S. 2004/0125916).

Herron does not disclose each of the elements as required in independent claims 14, 23 or 24.

Independent claim 14 requires a system for mapping a condition of a structure comprising a plurality of support members covered by a wall comprising: a computer processor having a memory; a position locating system for determining the position of a marker in a frame of reference and communicating said position to said computer processor; a density sensor in communication with said computer processor; and a marker associated with said density sensor.

Independent claim 23 requires a system for mapping a condition of a structure comprising a plurality of support members comprising: a computer processor; a two-dimensional model of the structure operatively associated with said computer; a three-dimensional model generator operatively associated with said computer processor; a position locating system for determining the position of a

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marker in a frame of reference and communicating said position to said computer processor, said position locating system comprising a plurality of ultra wideband receivers; a density sensor comprising an ultrasonic transducer in communication with said computer processor; and an ultra wideband transmitter associated with said density sensor.

Independent claim 24 requires a system for mapping a condition of a structure comprising a plurality of support members covered by a wall comprising: processor means; position locating means for determining the position of a marker in a frame of reference and communicating said position to said processor means; density sensing means operatively connected to said processor means; and a marker associated with said density sensing means.

Herron does not disclose all of the elements of independent claims 14, 23 and 24, and, therefore, cannot anticipate the independent claims.

For example, Herron does not disclose "a density sensor in communication with said computer processor" as in claim 14, "a density sensor comprising an ultrasonic transducer in communication with said computer processor" as in claim 23 or a "density sensing means operatively connected to said processor means" as in claim 24.

Herron does not disclose a density sensor or a density sensing means in communication or operatively connected to a processor as required in the claims. In fact, Herron does not disclose the measurement of density at all. Density is only mentioned in Herron in reference to a "low-density laminated structure", "a low density panel portion 28", "a first low-density stiffening spacer panel 48", "a mass-density of the panel portion 28", etc. See, for example, paragraphs 0027, 0030, 0045. These references are to the structural materials of the Herron invention and not a density measurement functionality. Herron does not disclose a density sensor or a density sensing means nor does Herron describe the measurement of density for determining a condition of a structure.

The Office Action cites "transducer 50" as well as "LEDs 100" in Herron as teaching the element of a density sensor as required in claims 14, 23 and 24. See page 2 of the December 12, 2006 Office Action.

However, the element 50 in Herron refers to a layer of a sensor and not a transducer as indicated in the Office Action. See paragraph 0030. In fact, element 50 is shown as one of many

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layers in a panel assembly 20. See Fig. 3. Element 50 is described only in the following sentence: "The top skin 38, in one embodiment, is adhered to the spacer panel 48 with a layer 50 of pressure sensitive adhesive...". See paragraph 0030. Herron uses a magnetic resonance signal for locating a marker signal in a radiation therapy application, not as a density sensor as required by the independent claims. Element 50 does not appear to describe a transducer or a density sensor or density sensing means, and no density sensor or density sensing means is found in the remainder of the specification of Herron.

In addition, the "LEDs 100" of Herron do not appear relevant to a density sensor as required in the independent claims. Appropriate clarification is requested.

Herron cannot anticipate independent claims 14, 23 and 24 because Herron does not disclose all of the elements of the claims. Dependent claims 15 - 22 and 25 - 27 depend from independent claims 14, 23 and 24 and add further patentable features to the patentable features of the independent claims.

Therefore, claims 14 - 27 are patentable over Herron. Withdrawal of the rejection is requested.

Claims 14 - 27 are patentable under 35 U.S.C. 102(e) over Acker et al. (U.S. 6,618,612).

Acker does not disclose each of the elements as required in independent claims 14, 23 or 24.

Independent claim 14 requires a system for mapping a condition of a structure comprising a plurality of support members covered by a wall comprising: a computer processor having a memory; a position locating system for determining the position of a marker in a frame of reference and communicating said position to said computer processor; a density sensor in communication with said computer processor; and a marker associated with said density sensor.

Independent claim 23 requires a system for mapping a condition of a structure comprising a plurality of support members comprising: a computer processor; a two-dimensional model of the structure operatively associated with said computer; a three-dimensional model generator operatively associated with said computer processor; a position locating system for determining the position of a

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marker in a frame of reference and communicating said position to said computer processor, said position locating system comprising a plurality of ultra wideband receivers; a density sensor comprising an ultrasonic transducer in communication with said computer processor; and an ultra wideband transmitter associated with said density sensor.

Independent claim 24 requires a system for mapping a condition of a structure comprising a plurality of support members covered by a wall comprising: processor means; position locating means for determining the position of a marker in a frame of reference and communicating said position to said processor means; density sensing means operatively connected to said processor means; and a marker associated with said density sensing means.

Acker does not disclose all of the elements of independent claims 14, 23 and 24, and, therefore, cannot anticipate the independent claims.

For example, Acker does not disclose "a density sensor in communication with said computer processor" as in claim 14, "a density sensor comprising an ultrasonic transducer in communication with said computer processor" as in claim 23 or a "density sensing means operatively connected to said processor means" as in claim 24.

Acker does not disclose a density sensor or a density sensing means in communication or operatively connected to a processor as required in the claims. In fact, Acker does not disclose a density sensor or a density sensing means, nor does Acker describe the measurement of density for determining a condition of a structure.

The Office Action does not disclose where in independent claims 14, 23 and 24 Acker discloses a density sensor or a density sensing means. In discussing dependent claims 19 and 26, the Office Action cites element 50 in Herron as teaching "said density sensor" and element 100 as teaching "an ultrasonic transducer". See page 3 of the December 12, 2006 Office Action.

However, the element 50 in Acker refers to a set of reference assemblies and not a density sensor or a density sensing means as indicated in the Office Action. See, for example, C. 6, ll. 12 - 20. The reference assemblies 50 are cylindrical coils of wire 100 surrounded by a housing. C. 6, ll. 12 - 46. The reference assemblies 50 are positioned on a patient during a medical procedure involving a probe for determining the location of the probe within a patient's body. C. 8, l. 47 - C.

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9, l. 56. The reference assemblies 50 do not measure density, but are used in locating a probe within a patient. The reference assemblies 50 do not appear to describe a density sensor or density sensing means, and no density sensor or density sensing means is found in the remainder of the specification of Acker.

In addition, the reference field transducer 100 of Acker is not an ultrasonic transducer as required by independent claim 23. The reference field transducers 100 are cylindrical coils of fine gauge wire that are part of the reference transducer assemblies 50 as described above. C. 6, ll. 15 - 17. The sensor of Acker incorporates a plurality of transducers 100 sensitive to magnetic filed components in mutually orthogonal directions. C. 5, ll. 50 - 52. Acker functions by locating a probe within a body by generating magnetic fields, not determining density using ultrasonic transducers as required by independent claim 23. The reference field transducers 100 do not appear to describe a density sensor or density sensing means, and no density sensor or density sensing means is found in the remainder of the specification of Acker.

Acker cannot anticipate independent claims 14, 23 and 24 because Acker does not disclose all of the elements of the claims. Dependent claims 15 - 22 and 25 - 27 depend from independent claims 14, 23 and 24 and add further patentable features to the patentable features of the independent claims.

Therefore, claims 14 - 27 are patentable over Acker. Withdrawal of the rejection is requested.

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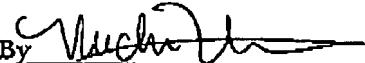
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In view of the above response, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-2228, under Order No. 021384.0101PTUS from which the undersigned is authorized to draw.

Dated: April 12, 2007

Respectfully submitted,

By 

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